

**COMPLETE SET OF PENDING CLAIMS**

A complete listing of the claims pursuant to 37 C.F.R. § 1.121(c) is shown below:

1-20. (Cancelled)

21. (Currently Amended) A printing system comprising:  
a printhead comprising a substrate including a plurality of ink ejection elements that are arranged in N regions;  
N region temperature sensors that each sense a temperature of one of the N regions;  
and  
a controller that adjusts a temperature of the substrate based upon an output of each of the N region temperature sensors and a pigment type of the ink that is to be ejected by the plurality of ink ejection elements.

22. (Previously Presented) The printing system of claim 21 further comprising a warming system that adjusts the temperature of the substrate in response to input from the controller.

23. (Previously Presented) The printing system of claim 22 wherein the warming system adjusts the temperature of the substrate by decreasing a temperature provided by the warming system.

24. (Previously Presented) The printing system of claim 22 wherein the warming system increases a temperature of the substrate prior to operation of the ink ejection elements.

25. (Previously Presented) The printing system of claim 24 wherein the controller allows operation of the plurality of ink ejection elements when the output of each of the N region temperature sensors is above a threshold.

26. (Currently Amended) The printing system of claim 25 wherein the threshold is a function of [a] the pigment type of the ink that is to be ejected by the plurality of ink ejection elements.

27. (Previously Presented) The printing system of claim 26 wherein the threshold is 40 degrees Celsius for black pigmented ink and 45 degrees Celsius for color pigmented ink.

28. (Cancelled)

29. (Previously Presented) The printing system of claim 21 wherein the controller ceases operation of the ink ejection elements when the output of the N region temperature sensors is above a threshold.

30. (Previously Presented) The printing system of claim 21 wherein the controller maintains the temperature of the substrate within a predefined range from a starting point of a print swath to an ending point of the print swath.

31. (Currently Amended) A printing system comprising:  
a printhead comprising a substrate including a plurality of ink ejection elements that are arranged in N regions;  
means for sensing a temperature of each of the N regions; and  
means for adjusting a temperature of the substrate based upon an output of the means for sensing the temperature of each of the N regions and a pigment type of the ink that is to be ejected by the plurality of ink ejection elements.

32. (Previously Presented) The printing system of claim 31 further comprising means for warming the temperature of the substrate in response to input from the means for adjusting.

33. (Previously Presented) The printing system of claim 32 wherein the means for warming adjusts the temperature of the substrate by decreasing the temperature provided by the means for warming.

34. (Previously Presented) The printing system of claim 32 wherein the means for warming increases the temperature of the substrate prior to operation of the ink ejection elements.

35. (Previously Presented) The printing system of claim 34 wherein the means for adjusting allows operation of the plurality of ink ejection elements when the output of the means for sensing is above a threshold.

36. (Previously Presented) The printing system of claim 35 wherein the threshold is a function of a pigment type of the ink that is to be ejected by the plurality of ink ejection elements.

37. (Previously Presented) The printing system of claim 36 wherein the threshold is 40 degrees Celsius for black pigmented ink and 45 degrees Celsius for color pigmented ink.

38. (Previously Presented) A printing system comprising:  
a print cartridge comprising:  
a printhead including a plurality of ink ejection elements that are arranged in N regions, and an ink supply including an ink having a pigment type, the ink being supplied for ejection by the ink ejection elements;

N region temperature sensors that each sense a temperature of one of the N regions;  
and

a controller that adjusts a temperature of the substrate based upon an output of each of the N region temperature sensors and the pigment type of the ink.

39. (Previously Presented) The printing system of claim 38 wherein the controller adjusts the temperature of the substrate to a predetermined threshold based upon the pigment type prior to allowing ejection by the ink ejection elements.

40. (Previously Presented) The printing system of claim 39 wherein the controller allows operation of the plurality of ink ejection elements when the output of each of the N region temperature sensors is above a threshold.

41. (Previously Presented) The printing system of claim 40 wherein the threshold is 40 degrees Celsius for black pigmented ink and 45 degrees Celsius for color pigmented ink.

42. (Previously Presented) The printing system of claim 38 wherein the controller ceases operation of the ink ejection elements when the output of the N region temperature sensors is above a threshold.

43. (Previously Presented) The printing system of claim 38 wherein the controller maintains the temperature of the substrate within a predefined range from a starting point of a print swath to an ending point of the print swath.